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EXAMINER

WEI, ZHENG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,970	Applicant(s) HAWLEY ET AL.	
	Examiner ZHENG WEI	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12, 20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12, 20 and 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. This office action is in response to the amendment filed on 05/20/2008.
2. Claims 1-6, 13-19 and 21 have been canceled.
3. Claims 7 and 20 have been amended.
4. Claims 22-26 have been added.
5. The objection to claim 21 is withdrawn in view of the Applicants' cancellation
6. The 35 U.S.C. 112 first paragraph rejection to claims 19-21 is withdrawn in view of the Applicants' amendment and argument.
7. Claims 7-12, 20 and 22-26 remain pending and have been examined.

Response to Arguments

8. Applicant's arguments filed on 05/20/2008, in particular on pages 5-9, have been fully considered:
 - At page 6, third paragraph, the Applicants submit that the Specification provides adequate written description for the requirements of amended claim 20. The Examiner thanks the Applicants provided detailed information and the 112 first rejection to claim 20 is withdrawn.
 - At page 7, the last paragraph, the Applicant points out that Shulman does not disclose determining tokens that match one of a plurality of syntax statements in a syntax library for a computer language in which the partial program

instruction statement is written. However, the Examiner respectfully disagrees. As Shulman disclosed at col.16, lines 41-46, "If it is determined at decision step 1250 that new information exists that is relevant to the next segment of the programming statement, then..." [emphasis added], it clearly indicates that the determination step including determining the match based on same/relevant programming language.

- At page 8, second paragraph, the applicants submit that there is no disclosure of the added claim requirement finding proposals based on the previous matching tokens if no match is determined. However, the Examiner's position is that Shulman discloses a method for displaying matched assistant information (proposal) and the Applicants' method also display same matched assistant information (proposal). Both methods based on the matched tokens. Moreover, it should be noted that claim language "parsing a partial program instruction statement into tokens divided into keywords and variables", does not further define the limitation of keywords (tokens). Thus, the delimiter type tokens e.g. "." in Shulman can also be considered as token. As Shulman disclosed at Fig.3 and Fig.4, (the user entered statement (the partial program instruction) with items 211"mytext" (token), item 212 "." (tokens) and item 202 (cursor position), when the token (item 212) "." entered and does not match, the proposal (item 220) generated at cursor position (item 202) based on the previous token "mytext" (item 211). Therefore, in the reasonable interpretation, Shulman does disclose said added limitation as the Applicants argued.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 7-12, 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Shulman (Shulman et al., US 6,026,233)

Claim 7:

Shulman discloses a method of providing a code assist function which suggests candidates responsive to a parsing of a partial program instruction statement, said method comprising:

- parsing a partial program instruction statement into tokens divided into keywords and variables (see for example, Fig.13A, steps 1331, 1331, “Parse Program Statement Into Tokens” and related text);
- determining whether the tokens match one of a plurality of syntax statements in a syntax library for a computer language in which the partial program instruction statement is written (see for example, col.16, lines 41-46, “If it is determined at decision step 1250 that new information exists that is relevant to the next segment of the programming statement, then...” Fig.13A, step

1334, "Locate Procedure ID Token" and related text; also see col.17, lines 19-25, "examining each token in the token list");

- moving a cursor positioned on one of the tokens for which the match is determined to a following token in response to determining that the token matches one of the syntax statements in the syntax library (see for example, Fig.13A, step 1336 and step 1338 "Generate Assist Window For List or Constant Value" and related text; also see fig.4 and Fig.5 about element 202 (cursor position));
- in response to determining that the token on which the cursor is positioned does not match one of the syntax statement, generating proposals from the cursor position based on previous tokens in the partial program instruction that matched syntax statements in the syntax library (see for example, Fig.3, Fig.4, item 210, 211, 202 and 220 about "mytext.f"; also see Fig.13B steps 1337 and 1370 and related text; also see col.17, lines 40-45, "the present argument token is not a symbol or other object entity that can be resolved, the processing continues at step 1370 because a default informational menu assist window that contains the procedure call argument list is all that can be displayed(proposal)); and
- providing proposals to append to the partial program instruction statement to a user responsive to the parsing of the partial program instruction statement. (see for example, Fig.5, elements 510 and 210 and related text, selected proposal (font) has been appended to partial program (mytext));

Claim 8:

Shulman further discloses the method of claim 7 comprising: proposing an identified variable as a proposal responsive to a verb of the partial program instruction statement (see for example, Fig.13B, step 1355, “Determine Object Type and Member Return Type”, step 1357 “Generate Assist Window with Member List” and related text).

Claim 9:

Shulman also discloses the method of claim 7 further comprising: proposing an identified variable as a proposal responsive to a variable type of the variable (see for example, col.4, lines46-48, “assist window includes any finite list of previously declared entities and/or entity type”, also see Fig.13B, step 1355, “Determine Object Type and Member Return Type”)

Claim 10:

Shulman also disclose the method of claim 7 further comprising: proposing an identified variable as a proposal responsive to a verb of the partial program instruction statement (see for example, Fig.13B, step 1355, “Determine Object Type and Member Return Type”, step 1357 “Generate Assist Window with Member List” and related text) or responsive to a variable type of the variable (see for example, col.4, lines46-48, “assist window includes any finite list of

previously declared entities and/or entity type”, also see Fig.13B, step 1355, “Determine Object Type and Member Return Type”).

Claim 11:

Shulman further discloses the method of claim 7 further comprising: proposing an identified variable as a proposal responsive to a portion of the program containing the partial program instruction statement (see for example, Fig.7, element 740 and related text for proposing an previous declared variable for the procedure “MyProc”)

Claim 12:

Shulman also discloses the method of claim 7 wherein the parsing of the program and the parsing of the partial program instruction statement are performed according to a user-selected programming language dependent file selected from a plurality of programming language dependent files (see for example, col.5, lines 44-46, “local program definition”, “global library definition”, also see, col.7, lines 6-9, “the present invention can be implemented within any programming language”)

Claim 20:

Shulman also discloses the method of claim 7, further comprising:

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- determining whether an end of the partial program instruction statement is reached; (see for example, Fig.3, item 212 and related text; also see col.8, lines 23-36); and
- in response to determining the end of the program instruction statement is reached generating proposals (see for example, Fig.3, items 212, 220 and related text; also see col.8, lines 23-36)

Claims 23:

Shulman further discloses the method of claim 7, wherein the partial program instruction statement is parsed based upon syntax statements from the syntax library (see for example, col.16, lines 41-46, "If it is determined at decision step 1250 that new information exists that is relevant to the next segment of the programming statement, then...").

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
12. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shulman (Shulman et al., US 6,026,233)

Claim 22:

Shulman also discloses the method of claim 7, further comprising:

- determining the computer language in which the partial program instruction statement is written (see for example, col.16, lines 41-46, "If it is determined at decision step 1250 that new information exists that is relevant to the next segment of the programming statement, then...")

but does not explicitly disclose selecting one of a plurality of syntax libraries to use to determine whether the tokens match one of the plurality of syntax statements in the syntax library specific to the determined computer language.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select relevant program syntax library including selecting the library wherein the tokens matched with the specific computer language. One would have been motivated to do so to provide the new information relevant to the next segment of the programming statement.

Claim 24:

Shulman also discloses The method of claim 7, further comprising:

- Reading next input from the user screen in the partial program instruction by using cursor (see for example, Fig.3, 4, Fig.11, step 1118 "Read Next CHAR/COMMAND"; step 1188 "Continue" and related text)

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- Wherein generating proposals comprises generating proposals from the cursor index position for the last matched token (see for example, Fig.11 step, 1185 and Fig.12 step 1258, “Update\Generate Assist Window”

but does not explicitly disclose generating a cursor index when moving the cursor to read next char or command. However, as Shulman disclosed at step 1180 and step 1180, the execution can be returned to the previous cursor position to read next character, it also implies that the cursor position is saved for the next reading step. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to save to cursor position in a variable such as “cursor index” to indicating last read tokens including the last arching tokens.

13. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shulman (Shulman et al., US 6,026,233) in view of Roy (Roy et al., US 6,337,693)

Claim 25:

Shulman discloses the method of claim 24, wherein generating proposals comprises:

- Generating proposals from the last matching token (see for example, Fig.4, item 211, 420 and related text); and
- Adding/creating an assist window to display all proposals (see for example, Fig.4, 220 and items 410-416 and related text))

But does not explicitly disclose using a vector to implement said window (Adding the proposals to a proposal vector. However, Roy in the same analogous art of creating geographic display data discloses using vector (see for example, Fig.5 and related text). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use vector to implement Shulman's proposal window. One would have been motivated to do so to generate display using vector for the purpose of efficiently view display image as suggested by Roy (see for example, summary, lines 6-7)

Claim 26:

Shulman and Roy disclose the method of claim 25, Roy further discloses wherein proposal vectors are generated from multiple cursor engines parsing different parts of the program statements;

- Concatenating the proposal vectors to create a combined proposal vector that is returned (see for example, Fig.6, step 610, "Create new map picture with addition data" and related text);
- Matching the combined proposal vector to determine an image (see for example, Fig.6, step 610, "Create new map picture with addition data" and related text);
- Displaying a window containing the determined image form which the user select a keyword, identifier or constant to continue entry of the partial program

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statement (see for example, Fig.6, step 612 "Display new map picture" and related text).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
15. Applicant's arguments with respect to claims rejection have been considered and Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571)

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270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. W./
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192